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PATENT
Customer No. 22,852
Attorney Docket No. 09498.0002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Ann X. LIU, et al.	)	Group Art Unit: 1773
	)	
Application No.: 09/235,686	)	Examiner: Monique R. Jackson
	)	
Filed: January 22, 1999	)	
	)	
For: SYNTHETIC RESIN FILM FOR LAMINATES AND METHOD OF PRODUCING SAME	)	Confirmation No.: 4330

Mail Stop Petition
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

PETITION UNDER 37 CFR 1.137(b) FOR REVIVAL OF AN APPLICATION FOR PATENT ABANDONED UNINTENTIONALLY

Applicants have received a Notice of Abandonment for this application dated July 1, 2004. The Notice states that an earlier response of the applicants included an improper Request for Continued Examination ("RCE").

Applicants hereby petition for revival of this application as being unintentionally abandoned. As required by 37 C.F.R. § 1.137(b)(1), applicants enclose a response to the Office Action dated October 27, 2003. Applicants also enclose the petition fee of $1,330.00 required by 37 C.F.R. § 1.137(b)(2).

The failure to file an appropriate response to the outstanding Office Action, and the resultant abandonment of this application, was unintentional. More particularly, the entire delay in filing the required reply from the due date for the reply until the filing of this Petition was unintentional.

The Office Action dated October 27, 2003, set a three month period for response, with extensions of time available under 37 C.F.R. 1.136(a). Applicants did indeed file a response to the Office Action on April 27, 2004. The response was in the form of an RCE

under 37 C.F.R. § 1.114. The RCE made reference to an Amendment filed on August 11, 2003, and authorized the Director to charge the RCE fee and extension of time fee to a deposit account. The RCE was signed by Ms. Michelle Burke, a representative of the applicants at that time. The RCE was filed after a second non-Final Office Action, which, procedurally, is not after closure of prosecution as required by 37 C.F.R. § 1.114(a).

In view of these circumstances, the record of prosecution clearly demonstrates that the applicants and their representatives did not intend to abandon this application. Instead, the application appears to have been abandoned as a result the procedural error of filing an RCE in response to a non-Final Office Action. The undersigned has spoken with Ms. Michelle Burke (the representative of the applicants who signed the RCE) to ensure that neither she nor the applicants intended to abandon the application. Ms. Burke confirmed that the application was never intended to be abandoned.

Applicants believe that this Petition meets all requirements of 37 C.F.R. § 1.137(b). The PTO is welcome to contact the undersigned for any additional information that may be deemed necessary for deciding this Petition.

If there are any other fees due in connection with the filing of this Petition, including any fees required for an extension of time under 37 CFR § 1.136, such an extension is requested, and the Commissioner is authorized to charge any related fees to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: August 9, 2004

By: _____
Steven J. Scott
Reg. No. 43,911

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Sir:

RESPONSE AND AMENDMENT UNDER 37 C.F.R. § 1.111

In reply to the Office Action dated October 27, 2003 (Office Action), and pursuant to 37 C.F.R. § 1.111, Applicants respectfully request reexamination and reconsideration of the claimed invention in view of the following amendments and remarks.

A Petition under 37 C.F.R. § 1.137(b) for Revival of an Application for Patent Abandoned Unintentionally is being filed concurrently with this Response and Amendment.

Amendments to the claims are reflected on the listing of claims, which begins on page 2 of this paper. Remarks begin on page 10 of this paper.

AMENDMENTS TO THE CLAIMS

Please amend claims 26, 45, 48, and 55 as indicated below. Please also add new claim 62. Deletions appear in ~~strikethrough font~~, and additions are **underlined**. This listing of claims will replace all prior versions and listings of claims in the application.

Complete listing of claims

1. **(Previously Presented)** A method of producing synthetic resin film for laminates, said synthetic resin film comprising a substrate impregnated with a thermosetting resin, said method comprising

(a) impregnating the substrate with a first thermosetting resin composition comprising a first uncured thermosetting resin and a low profile additive,

(b) drying the impregnated substrate of (a),

(c) impregnating the substrate of (b) with a second thermosetting resin composition comprising a second uncured thermosetting resin and a low profile additive, and

(d) drying the impregnated substrate of (c).

2. **(Previously Presented)** The method of claim 39, further comprising at least partially curing the first uncured thermosetting resin in the impregnated substrate.

3. **(Previously Presented)** The method of claim 39, wherein said low profile additive comprises ceramic microspheres.

4. **(Previously Presented)** The method of claim 39, wherein said low profile additive comprises thermoplastic polymer powder.

5. **(Previously Presented)** The method of claim 39, wherein said low profile additive comprises polyethylene powder.

6. **(Previously Presented)** The method of claim 39, wherein said first and second uncured thermosetting resin are each selected from the group consisting of melamine-formaldehyde, urea-formaldehyde, phenol-formaldehyde and mixtures thereof.

7. **(Previously Presented)** The method of claim 39, wherein the substrate is paper.

8. **(Previously Presented)** The method of claim 39, wherein the low profile additive is present in amounts sufficient to provide said synthetic resin film with a scratch resistance of about 2.5 Newtons or higher.

9. **(Original)** Synthetic resin film for laminates produced by the method according to claim 1.

10. **Cancelled**

11. **(Previously Presented)** The method of claim 1, further comprising at least partially curing the second uncured thermosetting resin in the impregnated substrate.

12. **(Previously Presented)** The method of claim 1, wherein said first uncured thermosetting resin and said second uncured thermosetting resin are the same.

13-15. **Cancelled**

16. **(Previously Presented)** The method of claim 1, wherein said first uncured thermosetting resin and said second uncured thermosetting resin are independently selected from the group consisting of melamine-formaldehyde, urea-formaldehyde, phenol formaldehyde and mixtures thereof.

17-25. **Cancelled.**

26. **(Currently Amended)** Synthetic resin film for laminates comprising a substrate impregnated with an at least partially cured thermosetting resin and **uncoated** ceramic microspheres, wherein the **uncoated** ceramic microspheres are present in amounts sufficient to provide said synthetic resin film with a scratch resistance of about 2.5 Newtons or higher.

27. **(Previously Presented)** A process of producing laminate, said process comprising assembling a plurality of layers of synthetic resin film at least one of said layers being the synthetic resin film of claim 9, and subjecting said assembly to heat and pressure sufficient to effect consolidation of said layers to produce a laminate.

28. **(Previously Presented)** The process of claim 27, wherein the heat necessary to effect consolidation is 230 to 340 degrees F and the pressure necessary to effect consolidation is 800 to 1600 psi.

29. **(Previously Presented)** The laminate produced by the process of claim 27.

30-32. **Cancelled**

33. **(Previously Presented)** A laminate comprising a synthetic resin film of claim 9 laminated to a base material.

34. **(Previously Presented)** The laminate of claim 33, wherein said base material comprises wood.

35. **(Previously Presented)** The laminate of claim 33, wherein said base material is selected from the group consisting of particle board, medium density fiber board and composite panel.

36 - 38. **Cancelled**

39. **(Previously Presented)** The method of claim 1, wherein the low profile additive is inert, substantially spherical and has a particle size in the range of about 5 to about 60 microns.

40-44. **Cancelled**

45. **(Currently Amended)** A method of producing synthetic resin film for laminates, said synthetic resin film comprising a substrate impregnated with a thermosetting resin, said method comprising

(a) impregnating the substrate with a thermosetting resin composition comprising an uncured thermosetting resin and **uncoated** ceramic microspheres; and

(b) drying the impregnated substrate of (a),

wherein the **uncoated** ceramic microspheres are present in amounts sufficient to provide said synthetic resin film with a scratch resistance of about 2.5 Newtons or higher.

46. **(Previously Presented)** The method of claim 45, further comprising

(c) impregnating the substrate of (b) with a second thermosetting resin composition comprising a second uncured thermosetting resin and a low profile additive, and

(d) drying the impregnated substrate of (c).

47. **Cancelled**

48. **(Currently Amended)** A method of producing synthetic resin film for laminates, said synthetic resin film comprising a substrate impregnated with a thermosetting resin, said method comprising

(a) impregnating the substrate with a thermosetting resin composition comprising an uncured thermosetting resin and **uncoated** ceramic microspheres; and

(b) drying the impregnated substrate of (a), the **uncoated** ceramic microspheres comprising about 0.5 to about 4.75% **(wt)** of the thermosetting resin after drying the impregnated substrate.

49. **(Previously Presented)** The method of claim 48, further comprising at least partially curing the uncured thermosetting resin in the impregnated substrate.

50. **(Previously Presented)** The method of claim 48, wherein said uncured thermosetting resin is selected from the group consisting of melamine-formaldehyde, urea-formaldehyde, phenol-formaldehyde and mixtures thereof.

51. **(Previously Presented)** The method of claim 48, wherein the substrate is paper.

52. **(Previously Presented)** The method of claim 48, wherein the ceramic microspheres are present in amounts sufficient to provide said synthetic resin film with a scratch resistance of about 2.5 Newtons or higher.

53. **(Previously Presented)** The method of claim 48, further comprising
(c) impregnating the substrate of (b) with a second thermosetting resin composition comprising a second uncured thermosetting resin and a low profile additive, and
(d) drying the impregnated substrate of (c).

54. **(Previously Presented)** Synthetic resin film for laminates produced by the method according to claim 48.

55. **(Currently Amended)** A method of producing synthetic resin film for laminates, said synthetic resin film comprising a substrate impregnated with a thermosetting resin, said method comprising

(a) impregnating the substrate with a thermosetting resin composition comprising an uncured thermosetting resin and **uncoated** ~~alkali alumino silicate~~ ceramic microspheres; and

(b) drying the impregnated substrate of (a).

56. **(Previously Presented)** The method of claim 55, further comprising at least partially curing the uncured thermosetting resin in the impregnated substrate.

57. **(Previously Presented)** The method of claim 55, wherein said uncured thermosetting resin is selected from the group consisting of melamine-formaldehyde, urea-formaldehyde, phenol-formaldehyde and mixtures thereof.

58. **(Previously Presented)** The method of claim 55, wherein the substrate is paper.

59. **(Currently Amended)** The method of claim 55, wherein the ~~alkali alumino silicate~~ ceramic microspheres are present in amounts sufficient to provide said synthetic resin film with a scratch resistance of about 2.5 Newtons or higher.

60. **(Previously Presented)** The method of claim 55, further comprising

(c) impregnating the substrate of (b) with a second thermosetting resin composition comprising a second uncured thermosetting resin and a low profile additive, and

(d) drying the impregnated substrate of (c).

61. **(Previously Presented)** Synthetic resin film for laminates produced by the method according to claim 55.

62. **(New)** The method of claim 55 wherein the ceramic microspheres are alkali alumino silicate ceramic microspheres.

REMARKS

I. Status of the claims

After entering this amendment, claims 1-9, 11, 12, 16, 26-29, 33-35, 39, 45, 46, and 48-62 will be pending in this application. Claims 26, 45, 48, and 55 have been amended in this response in order to more clearly define the subject matter of the invention by indicating that the ceramic microspheres used in the present methods are uncoated. No new matter has been added by these amendments. Support for these amendments can be found in the working examples of the present specification, where all ceramic microspheres are used uncoated. Claim 48 was also amended in response to the Office's indefinite rejection under 35 U.S.C. § 112, second paragraph to indicate that the percentages of ceramic microspheres are on a weight basis. Support for this amendment can be found, for example, in the specification at p. 6, lines 11-14, see an explanation of how these values were calculated in Point No. 3 of the Declaration under 37 C.F.R. § 1.132 by the inventor Ann X. Liu filed on November 8, 2000 (First Liu Declaration). Claims 55 and 59 were also amended in order to more clearly define the subject matter of the invention by replacing "alkali alumino silicate ceramic microspheres" with "ceramic microspheres." A method according to claim 55 wherein the ceramic microspheres are alkali alumino silicate ceramic microspheres is now claimed in new claim 62.

II. Notice of Non-Compliant Amendment

Applicants received a Notice of Non-Compliant Amendment (the Notice) dated May 20, 2004. The Notice required Applicants to re-submit an Amendment to the Claims because not all the claims in the amendment filed on April 27, 2004, had the proper status

identifier. The present response contains a complete listing of the claims, which should supersede any previous version of the claims.

III. Rejections under 35 U.S.C. § 112, second paragraph

The Office rejected claims 48-54 under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. The Office argues that claim 48 fails to provide a basis (weight, volume, etc) for the percentage of ceramic microspheres in the thermosetting resin. With the sole purpose of expediting prosecution, Applicants have amended independent claim 48 to indicate that the percentages of ceramic microspheres recited in this claim are on a weight basis. Accordingly, this rejection is now moot and Applicants respectfully request that the rejection be withdrawn.

IV. Rejections under 35 U.S.C. § 103

The Office rejected claims 1-9, 11, 12, 16, 26-29, 33-35, 39, 45, 46, and 48-61 under 35 U.S.C. § 103 as allegedly being unpatentable over U.S. Patent No. 6,290,815 (*Magnin*) in view of the pamphlet published by 3M and Zeelan Industries, Inc. titled "Microspheres" (*Microspheres* Pamphlet.) The Office argues that *Magnin* teaches a sheet containing grit particles coated in a non-abrasive material, wherein the particles may be chosen from alumina, silica, glass, or ceramic particles or mixtures thereof and may be spherical or approximately spherical. Office Action at p. 2.

The Office admits that *Magnin* does not teach utilizing multiple impregnating and drying steps, but alleges that "it is well established that selection of any order of performing process steps or repeating process steps is *prima facie* obvious in the absence of new or unexpected results." Office Action at p. 3. The Office further argues that the skilled artisan

would have been motivated to replace the grit particles disclosed in *Magnin* with the commercially available microspheres disclosed in the *Microspheres* Pamphlet to arrive at the present invention. Applicants respectfully traverse.

A. Claims 1-9, 11, 12, 16, 27-29, 33-35, and 39

The Office is respectfully reminded that in order to prove a *prima facie* case of obviousness, the Office needs to establish, *inter alia*, that the combined references contain all of the elements of the instant claims. M.P.E.P. § 2143.03. Claim 1, from which claims 2-9, 11, 12, 16, 27-29, 33-35, and 39 depend, recites the steps of:

(a) impregnating the substrate with a first thermosetting resin composition comprising a first uncured thermosetting resin and a low profile additive,

(b) drying the impregnated substrate of (a),

(c) impregnating the substrate of (b) with a second thermosetting resin composition comprising a second uncured thermosetting resin and a low profile additive, and

(d) drying the impregnated substrate of (c).

As already admitted by the Office (Office Action at p. 3), the references cited in this rejection fail to teach or suggest the invention as a whole, including at least elements (c) and (d) of this process. For at least this reason, the Office has not proved a *prima facie* case of obviousness and Applicants respectfully request that this rejection be withdrawn.

Moreover, Applicants respectfully dispute the Office's allegation that "it is well established that selection of any order of performing process steps or repeating process steps is *prima facie* obvious in the absence of new or unexpected results." Office Action at

p. 3. The Office has provided no evidence to support this "well established" principle. The legal proposition offered by the Office is a *per se* rule of obviousness and is not valid. The following commentary from the Court of Appeals for the Federal Circuit makes that clear:

> The use of *per se* rules, while undoubtedly less laborious than a searching comparison of the claimed invention--including all its limitations—with the teachings of the prior art, flouts section 103 and the fundamental case law applying it. *Per se* rules that eliminate the need for fact specific analysis of the claims and prior art may be administratively convenient for PTO Examiners and the Board. Indeed, they have been sanctioned by the Board as well. But reliance on *per se* rules of obviousness is legally incorrect and must cease.

In re Ochiai, 37 U.S.P.Q.2d 1127, 1133 (Fed. Cir. 1995). Accordingly, pursuant to the protocol described in M.P.E.P. § 2144.03, Applicants respectfully request that the Office provide proof of the statement supporting the aforementioned "well established" principle. Rather than relying on *per se* rules, the Office must provide evidence that there was a motivation for the skilled artisan to modify the teachings of the prior art to arrive at the present invention. *See* M.P.E.P. § 2143.01.

In the present case, the Office has failed to provide the requisite motivation the skilled artisan would have had to modify *Magnin's* teachings to practice the instantly claimed invention. The invention, moreover, should not be viewed as simply repeating steps that may have been exemplified in *Magnin*. *Magnin* teaches the coating of a sheet with a thermosetting resin that may contain grits. Nowhere in *Magnin* is there a teaching or suggestion to impregnate an already impregnated substrate itself (as generated in steps (a) and (b) in claim 1) with a *second* thermosetting resin composition comprising a low profile additive as recited in claim 1. This is not simply repeating *Magnin's* method, but doing something different. Indeed, Applicants fails to see why the skilled in the art would be motivated to modify *Magnin's* method in the absence of a disclosed benefit or suggestion

for doing so, particularly given that *Magnin's* method is already disclosed to be the solution that "has been sought for more than twenty-five years" to the problem of reducing the wear of machines for manufacturing abrasion-resistant sheets. *Magnin* at col. 3, lines 18-23; col. 4, lines 53-64. The Office appears to have relied on the Microspheres Pamphlet for a teaching of alkali alumino silicate ceramic microspheres. This teaching still does not suggest the claimed invention, even if combined with *Magnin*.

In light of the foregoing arguments, Applicants submit that the Office has not proved a *prima facie* case of obviousness and accordingly, Applicants respectfully request that this rejection be withdrawn for claims 1-9, 11, 12, 16, 27-29, 33-35, and 39.

B. Claims 26, 45, 46, and 48-62

Applicants have amended independent claims 26, 45, 48, and 55 to recite the use of "uncoated ceramic microspheres." Because of their dependency, claims 46, 49-54, and 56-62 also contain this limitation. Such amendment is supported by the specification as a whole and by all the working examples therein, where all ceramic microspheres used have been uncoated.

Magnin clearly does not suggest the instant invention, but instead teaches the opposite. Indeed, the main objective of *Magnin's* invention was to coat its grit particles with a non-abrasive coating. *Magnin* at col. 4, lines 24-26. As a result, one skilled in the art would not have been motivated to use any of the uncoated spheres disclosed in the Microspheres Pamphlet in the process of *Magnin* and one skilled in the art would not have combined their teachings in the manner proposed by the Office.

Moreover, neither *Magnin* nor the Microspheres Pamphlet indicate or suggest the amount of ceramic microspheres sufficient to provide a resin film with a scratch resistance

of about 2.5 Newtons or higher, as recited in claims 8, 26, 45, 46, and 52. The Microspheres Pamphlet only cites the intrinsic hardness of the ceramic microspheres. Microspheres Pamphlet at p. 2. At the most, *Magnin* discusses the hardness of the microspheres in the context of abrasion resistance. *See, e.g., Magnin* at col. 2, lines 19 to 31. However, abrasion resistance and scratch resistance are different properties, and particles that provide abrasion resistance (*e.g.*, alumina; *see Magnin* at col. 5, lines 12 to 16) may not have significant impact on scratch resistance. See Table A of the First Liu Declaration (showing the effect of the addition of alumina on the scratch resistance of a resin film).

In summary, the cited references do not meet all of the limitations of claims 26, 45, 46, and 48-62. Accordingly, Applicants respectfully request that this rejection be withdrawn.

V. Conclusions

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

By: _____
Steven J. Scott
Reg. No. 43,911

Dated: August 9, 2004